

## **REMARKS**

The Office Action dated September 17, 2007, has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto.

By this Amendment, claims 1 and 11 have been amended. No new matter is presented. Support for the amendments to claims 1 and 11 can be found in at least Figures 1-3 of the application as originally filed. Claims 1-14 are pending and respectfully submitted for consideration.

### **Rejections Under 35 U.S.C. § 103**

Claims 1, 3, 4 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saiz (U.S. Patent No. 5,784,978) in view of Benesh (U.S. Patent No. 4,359,311). Claims 3 and 4 depend from claim 1. Saiz is cited for disclosing many of the claimed elements of the invention with the exception of three equally-spaced blades. Benesh is cited for curing this deficiency.

To the extent that the rejection remains applicable to the claims as currently pending, the Applicant traverses the rejection and respectfully submits that claims 1, 3, 4 and 11 recite subject matter that is neither disclosed nor suggested by the cited references.

Claim 1, as amended, recites that the turbine comprises three longitudinally extending substantially rigid blades each of which increases in axial cross-sectional width along the axis. Claim 11, as amended, recites a vertical axis wind turbine having three substantially rigid sails or blades, each of which increases in axial cross-sectional width along the axis.

The Applicant respectfully submits that Saiz fails to disclose or suggest the claimed features of the invention as recited in claims 1 and 11. The Office Action cites Saiz for teaching a turbine including dihedral blades, formed by adjacent sails 3, 3' connected along edges 7, 7'. See page 2, lines 21-22 of the Office Action. The Applicant respectfully submits, however, that the sails 3, 3' in Saiz are not substantially rigid. Specifically, Saiz discloses a vertical axis wind turbine with fabric sails of triangular shape. See column 2, lines 57-65 of Saiz. Saiz further discloses that the sails can be rolled around the shaft. See column 2, line 17 of Saiz. As the sails 3, 3' and Saiz are fabric, the sails are not substantially rigid, as also recited in claims 1 and 11. Therefore, Saiz does not disclose or suggest the features of the invention as recited in amended claims 1 and 11.

Further, with respect to both claims 1 and 11, as the sails in Saiz are formed from fabric, the sails are therefore known to have a constant cross-sectional thickness or width in all directions. As such, the sails 3, 3' in Saiz do not constitute blades wherein "each of which increases in axial cross-sectional width along the [longitudinal] axis" as required by claims 1 and 11. Therefore, Saiz fails to disclose the features of the invention as recited in claims 1 and 11.

The Applicant respectfully submits that Benesh fails to cure the deficiencies in Saiz with respect to claims 1 and 11, as Benesh also does not disclose or suggest three longitudinally extending substantially rigid blades each of which increases in axial cross-sectional width along the axis. In contrast, Benesh discloses three blades which have a substantially constant cross-section in the axial direction.

Therefore, Benesh fails to cure the deficiencies in Saiz with respect to claims 1 and 11. Accordingly, the combination of Saiz and Benesh fail to disclose or suggest the features of the invention as recited in claims 1 and 11.

Claims 2 and 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saiz in view of Benesh as applied to claims 1 and 11 above, and further in view of Kolozsy (U.S. Patent No. 1,712,149). Saiz and Benesh are cited for disclosing many of the claimed elements of the invention with the exception of the use of longitudinally extending rearwardly inclined edge strips. Kolozsy is cited for curing this deficiency. Claim 2 depends from claim 1 and claims 12-14 depend from claim 11. The Applicant traverses the rejection and respectfully submits that claims 2 and 12-14 recite subject matter that is neither disclosed nor suggested by the cited references.

The Office Action asserts, in the Response to Arguments section on page 2 of the Office Action, that fabric blades of wind turbines are under considerable tension and would be sufficiently rigid to support the edge strips (extremities 23) of Kolozsy. See page 2, lines 7-10, of the Office Action. The Applicant respectfully submits that it would not have been obvious to modify the combination of Saiz and Benesh with Kolozsy in the manner suggested in the Office Action.

As discussed above, in Saiz, the sails 3, 3' are fabric and can be rolled. Benesh does not disclose or suggest an edge strip rearwardly inclined relative to the direction of rotation. Kolozsy fails to cure the deficiency in Saiz because Kolozsy is not properly combinable with the combination of Saiz and Benesh. Although the sails in Saiz are under tension, the hypotenuse edge of the sails 3, 3' are not attached to either the mast or the boom. Therefore, in actual use, as would be known by any person of ordinary skill

in the art, the edge of the sails 3, 3' continually vibrate and flap. As such, one of ordinary skill in the art would not apply the extremities 23 in Kolozsy to such a sail in Saiz that continually vibrates and flaps. As such, the applicants respectfully submit that Saiz and Benesh are not properly combinable to with Kolozsy to teach or suggest the features of the invention as recited in claims 2 and 12-14. Therefore, the Applicant respectfully requests withdrawal of the rejection of claims 2 and 12-14 over Saiz in view of Benesh and Kolozsy.

Claims 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saiz in view of Benesh as applied to claim 1 above, and further in view of Wilhelm (U.S. Patent No. 5,044,878). Claims 5-8 depend from claim 1. Saiz and Benesh are cited for disclosing many of the claimed elements of the invention with the exception of the use of a plurality of turbines mounted on the longitudinal axis. Wilhelm is cited for curing this deficiency. The Applicant traverses the rejection and respectfully submits that claims 5-8 recite subject matter that is neither disclosed nor suggested by the cited references.

The Applicant respectfully submits that Wilhelm fails to cure the deficiencies in Saiz and Benesh with respect to claim 1 as Wilhelm also does not disclose or suggest at least the features of three longitudinally extending substantially rigid blades each of which increases in axial cross-sectional width along the axis. As such, Wilhelm fails to cure the deficiencies in Saiz and Benesh with respect to claim 1, and therefore, would not teach or suggest the features of the invention as recited in dependent claims 5-8.

Claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saiz in view of Benesh as applied to claim 1 above, and further in view of

Bergstein (U.S. Patent No. 5,333,996). Saiz and Benesh are cited for disclosing many of the claimed elements of the invention with the exception of the use of a liquid to cause rotation of the turbine and the turbine being connected to an electric generator. Bergstein is cited for curing this deficiency.

Claims 9 and 10 depend from claim 1. As discussed above, Saiz and Benesh fail to disclose or suggest the features of the invention as recited in claim 1. Bergstein fails to cure the deficiencies in Saiz and Benesh as Bergstein also does not disclose or suggest three longitudinally extending substantially rigid blades each of which increases in axial cross-sectional width along the axis. As such, the combination of Saiz, Benesh and Bergstein fail to disclose or suggest the features of the invention as recited in claim 1, and therefore, dependent claims 9 and 10.

To establish a *prima facie* case of obviousness, each and every feature of a rejected claim must be taught or suggested by the applied art of record. See M.P.E.P. § 2143.03.

In view of the above, the Applicant respectfully submits that Saiz, Benesh, Wilhelm and Bergstein fail to support a *prima facie* case of obviousness for purposes of a rejection of claims 1-14 under 35 U.S.C. § 103. Accordingly, claims 1-14 are not rendered obvious in view of Saiz, Benesh, Wilhelm and Bergstein and should be deemed allowable.

### **Conclusion**

The Applicant respectfully submits that claims 1 and 11 are allowable. Claims 2-10 depend from claim 1 and claims 12-14 depend from claim 11. The Applicant further submits that each of these claims incorporate the patentable aspects thereof,

and are therefore allowable for at least the same reasons as discussed above. Accordingly, the Applicant respectfully requests withdrawal of the rejections, allowance of claims 1-14, and the prompt issuance of a Notice of Allowability.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing Attorney Dkt. No. 026328-00007.**

Respectfully submitted,



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